

Please replace claims 1, 9, 13 and 14 as follows:

a 1. (Amended) A voltage regulator of a vehicle AC generator including a rotor having a plurality of magnetic poles, a field coil for polarizing said plurality of magnetic poles, an armature having an armature core with a plurality of phase windings for generating AC voltage under the influence of a rotating magnetic field provided by said rotor and a full-wave rectifier for converting said AC voltage into DC voltage, said voltage regulator comprising:

first means for providing a variable threshold level representing a DC component of phase voltage of one of said phase windings,
a comparator for comparing the phase voltage of said one of said phase windings with the variable threshold level to provide a pulse signal that is proportional to a rotation speed of said rotor, and
second means for energizing said field coil when the number of pulses of said pulse signal becomes larger than a predetermined number.

a² 9. (Amended) The voltage regulator of a vehicle AC generator as claimed in claim 8, wherein

said first means comprises a first resistor connected between the output terminal of said phase winding and the negative terminal of a vehicle battery, a series circuit of a second resistor having much lower resistance than said first resistor and a switching means connected in parallel with said first resistor, wherein
said switching means is opened if said phase voltage is detected to be higher than a predetermined voltage.

a³ 13. (Amended) A voltage regulator of a vehicle AC generator including a rotor having a plurality of magnetic poles and a field coil for polarizing said plurality of magnetic poles, an armature having an armature core with a plurality of phase windings for generating

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cont.*

AC voltage under the influence of a rotating magnetic field provided by said rotor and a full-wave rectifier for converting said AC voltage into DC voltage, said voltage regulator comprising:

an input terminal connected to one of said phase windings;
a sub-power circuit, connected to said input terminal, for detecting phase voltage of one of said phase windings and generating a rotation signal;
a main power circuit, connected to said sub-power circuit, for supplying power;
a field current switching element connected to said field coil;
a voltage control circuit, connected to said main power circuit for monitoring the output voltage of said full-wave rectifier and generating a control signal that controls said field current switching element so that said output voltage of said full-wave rectifier can be controlled at a prescribed level; wherein said sub-power circuit comprises:

a comparator having a first input terminal connected to said input terminal and a second input terminal, said comparator providing an output pulse signal;
first means, connected to said second input terminal, for providing a variable threshold level representing a DC component of said phase voltage; and
second means for energizing said field coil when the number of pulses of said pulse signal becomes larger than a predetermined number.

14. (Amended) A voltage regulator of a vehicle AC generator including a rotor having a field coil and a plurality of magnetic poles, an armature having a plurality of phase windings and a full-wave rectifier connected to said phase windings, said voltage regulator comprising:

a phase-voltage-input terminal connected to one of said phase windings;

Claim 3
a phase-voltage-detection circuit, connected to said phase voltage input terminal, for detecting phase voltage of said one of said phase windings and generating a rotation signal if it detects said phase voltage;

a field current switching element connected to said field coil;

a voltage control circuit for monitoring the output voltage of said full-wave rectifier and generating a control signal that controls said field current switching element so that said output voltage of said full-wave rectifier can be controlled at a prescribed level; wherein said phase-voltage-detection circuit comprises:

a comparator having a first input terminal connected to said phase-voltage-input terminal and a second input terminal, said comparator providing an output pulse signal

a threshold circuit, connected to said second input terminal, for providing a variable threshold level representing a DC component of said phase voltage, and means for energizing said field coil when the number of pulses of said pulse signal becomes larger than a predetermined number.

REMARKS

Claims 1 and 3-18 are pending. By this Amendment, Claim 2 is canceled without prejudice or disclaimer. Claims 1, 9, 13 and 14, the drawings and the title are amended. No new matter is added.

The attached Appendix includes a marked-up copy of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Applicants request all further communications from the Patent Office be forwarded to Oliff and Berridge, PLC, in accordance with the Notice Regarding Power Of Attorney mailed on March 1, 2002.